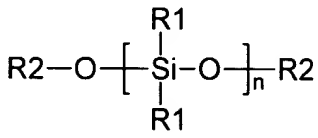
Claims

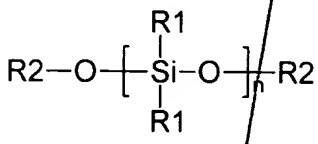
1. Ambient temperature curing coating composition comprising
   - a polysiloxane having the formula



   wherein each R1 is selected from the group consisting of alkyl, aryl, and alkoxy groups having up to six carbon atoms, reactive glycidoxy groups, and $OSi(OR3)_3$ groups, wherein each R3 independently has the same meaning as R1, each R2 is selected from the group consisting of hydrogen and alkyl and aryl groups having up to six carbon atoms, and wherein n is selected so that the molecular weight of the polysiloxanes is in the range of from 500 to about 2,000, and
   - an alkoxysilyl-functional acrylic polymer
   - optionally water as curing agent,

   wherein said coating composition is curable with a curing agent consisting essentially of atmospheric moisture and/or water.

2. Ambient temperature curing coating composition comprising
   - a polysiloxane having the formula



   wherein each R1 is selected from the group consisting of alkyl, aryl, and alkoxy groups having up to six carbon atoms, reactive glycidoxy groups, and $OSi(OR3)_3$ groups, wherein each R3 independently has the same meaning as R1, each R2 is selected from the group consisting of hydrogen and alkyl and aryl groups having up to six carbon atoms, and wherein n is selected so that the molecular weight of the polysiloxanes is in the range of from 500 to about 2,000, and

- an alkoxysilyl-functional acrylic polymer
- an amino-functional compound,

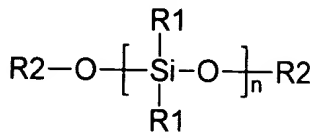
wherein the amino-functional compound is an aminosilane of general formula Y-Si-$(O-X)_3$, wherein Y is $H(HNR)_a$ and a is an integer from one to six, each R is a difunctional organic radical independently selected from the group consisting of aryl, alkyl, dialkylaryl, alkoxyalkyl, and cycloalkyl radicals, and R can vary within each Y molecule, each X may be the same or different, and is limited to alkyl, hydroxyalkyl, alkoxyalkyl, and hydroxyalkoxyalkyl groups containing fewer than about six carbon atoms.

3. Ambient temperature curing coating composition according to claim 1 wherein the alkoxysily-functional acrylic polymer is prepared from a mixture of at least three different olefinically unsaturated monomers and that said mixture is reacted in the presence of a polysiloxane, wherein at least one of the monomers is an alkoxysilyl-functional olefinically unsaturated monomer.

4. Ambient temperature curing coating composition according to claim 2 wherein the alkoxysily-functional acrylic polymer is prepared from a mixture of at least three different olefinically unsaturated monomers and that said mixture is reacted in the presence of a polysiloxane, whereby at least one of the monomers is an alkoxysilyl-functional olefinically unsaturated monomer.

5. Process for the preparation of an alkoxysilyl-functional acrylic polymer, wherein a mixture of at least three different olefinically unsaturated monomers are reacted in the presence of a polysiloxane, wherein at least one of the monomers is an alkoxysilyl-functional olefinically unsaturated monomer.

6. Process according to claim 5 wherein the polysiloxane is a polysiloxane having the formula



wherein each R1 is selected from the group consisting of alkyl, aryl, and alkoxy groups having up to six carbon atoms, reactive glycidoxy groups, and $OSi(OR3)_3$ groups, wherein each R3 independently has the same meaning as R1, each R2 is selected from the group consisting of hydrogen and alkyl and aryl groups having up to six carbon atoms, and wherein n is selected so that the molecular weight of the polysiloxanes is in the range of from 500 to about 2,000.

7. Process according to claim 5 wherein the mixture of olefinically unsaturated monomers comprises trimethoxysilylpropyl methacrylate, methylmethacrylate and butyl acrylate.

8. Process according to claim 6 wherein the mixture of olefinically unsaturated monomers comprises trimethoxysilylpropyl methacrylate, methylmethacrylate and butyl acrylate.

9. Method of using the coating composition of claim 1 as finish coating and/or primer coat.

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10. Method of using the coating composition of claim 2 as finish coating and/or primer coating.

11. Method of using the coating composition of claim 3 as finish coating and/or primer coating.

12. Method of using the coating composition of claim 4 as finish coating and/or primer coating.

13. Method of using the coating composition of claim 1 as a finish coating on buildings, steel structures, automobiles, aircraft, other vehicles, general industrial machinery and/or fitments.

14. Method of using the coating composition of claim 2 as the finish coating on buildings, steel structures, automobiles, aircraft, other vehicles, general industrial machinery and/ar fitments.

15. Method of using the coating composition of claim 3 as the finish coating on buildings, steel structures, automobiles, aircraft, other vehicles, general industrial machinery and/or fitments.

16. Method of using the coating composition of claim 4 as a finish coating on buildings, steel structures, automobiles, aircraft, other vehicles, general industrial machinery and/or fitments.

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